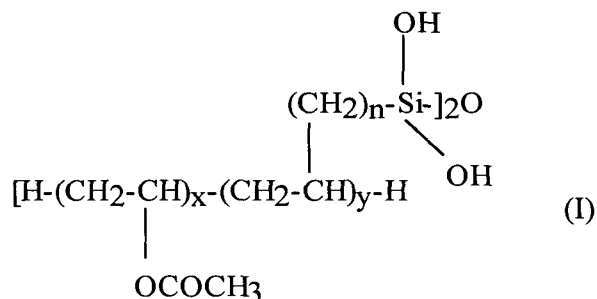


What is claimed is:

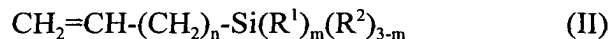
1. A one-pot polyvinyl acetate copolymer aqueous emulsion, wherein the polyvinyl acetate copolymer has the following formula (I):



wherein :

- n represents an integer of from 0 to 5;
 - a ratio of x/y is from 4 to 1000;
 - a molecular weight of the polyvinyl acetate copolymer is from 1,000 to 800,000.
2. The one-pot polyvinyl acetate copolymer aqueous emulsion according to claim 1, wherein the ratio of x/y is from 4 to 190.
 3. The one-pot polyvinyl acetate copolymer aqueous emulsion according to claim 1, wherein the ratio of x/y is from 15 to 190.
 4. A method for producing the one-pot polyvinyl acetate copolymer aqueous emulsion according to claim 1, which comprises the steps of:
 - reacting vinyl acetate with silicon monomer containing ethylenically unsaturated functional group represented by the following formula (II) in the presence of

catalyst in aqueous medium at an atmosphere pressure:



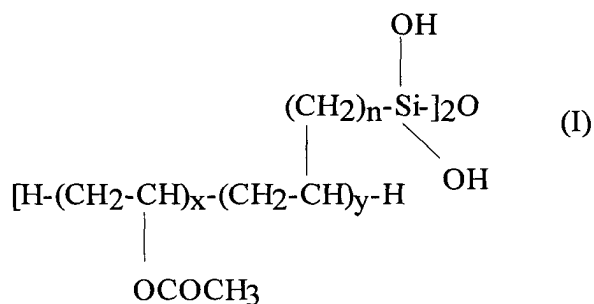
wherein $\text{R}^1 = \text{C}_{1-6}$ alkyl group;

$\text{R}^2 = \text{C}_{1-40}$ alkoxy group, preferably C_{1-12} alkoxy group;

$n = 0$ to 5 ;

$m = 0$ to 3 ;

to produce the aqueous emulsion of the polyvinyl acetate of following formula (I):



wherein :

n represents an integer of from 0 to 5 ;

a ratio of x/y is from 4 to 1000 ;

a molecular weight of the polyvinyl acetate copolymer is from $1,000$ to $800,000$;

wherein the silicon monomer containing ethylenically unsaturated functional group

is 0.01 to 15% based on the total weight of vinyl acetate and the silicon monomer.

5. The method according to claim 4, wherein the reaction is carried out at a

temperature of from 55 to 90°C .

6. The method according to claim 4, which further comprises a step of aging the

copolymer at a temperature of from 65 to 95°C.

7. The method according to claim 4, wherein the catalyst is persulfate.
8. The method according to claim 7, wherein the persulfate is selected from the group consisting of ammonium persulfate, sodium persulfate, potassium persulfate, and a combination thereof.
9. The method according to claim 4, wherein the catalyst is peroxide.
10. The method according to claim 9, wherein peroxide is selected from the group consisting of hydrogen peroxide, benzoyl peroxide, and a combination thereof.
11. The method according to claim 4, wherein the silicon monomer containing ethylenically unsaturated functional group is 0.5 to 3 % based on the total weight of vinyl acetate and the silicon monomer.